REMARKS

Claims 1, 7, 21, and 35 have been amended. Claims 40-63 have been cancelled without prejudice or disclaimer as being drawn to a non-elected invention. Claims 1-39 remain in the application. Further examination and reconsideration of the application, as amended, is hereby requested.

In Section 1 of the Office Action, the Examiner maintained the restriction requirement and made it FINAL. Accordingly, Applicant has cancelled claims 40-63 without prejudice or disclaimer and reserves the right to file divisional applications to pursue their allowance.

In Section 3 of the Office Action, the Examiner rejected claims 1-3 and 6 under 35 USC 102(b) as being anticipated by Watanabe (5, 648, 181). In Section 5 of the Office Action, the Examiner rejected claims 4 and 5 as being unpatentable over Watanabe. Applicant respectfully traverses these rejections as Watanabe does not disclose nor render obvious Applicant's invention. However, Applicant has amended claim 1 to further define and distinguish Applicant's invention over the art made of record. In particular, Watanabe discloses a light emission layer 4 that includes lanthanum fluoride and a rare earth metal in a 5-90% concentration. The light emission layer 4 is contacted on opposing sides by insulating layers 3 which separate the light emission layer 4 from transparent electrode 5 and back electrode 2 (see Watanabe abstract). As noted in Watanabe's background (col. 1:33-39, and please see also US patent 5,086,252 cited in Watanabe at col.1:27-41 for a description of theory of this type of light emission structure), the Watanabe disclosed structure is an "impact ionization" structure where the electrons of the light emission layer matrix are directly collided with one another to emit a fluorescence. The transparent electrode 5 and the back electrode 2 are driven by an AC voltage to allow for displacement current (hot electrons) to provide a primary source of impact electrons. Therefore, Watanabe does not disclose "an electroluminescent device" "configured to produce electroluminescence from the *recombination of injected holes and injected electrons*" as Applicant is claiming. Rather, as noted, Watanabe relies on electron injection to collide with the matrix of the light emitting layer. Further, the Applicant is claiming, as amended, "a controllable hole injection structure" and "a controllable electron injection structure" "*the electron injection structure being controllable independently of the controllable hole injection structure.*" Applicant discloses several different hole and electron structures in Figs. 1, 2, 5, and 6 that

controllably operate independently from each other. Watanabe instead discloses two *dependent* electron injection structures, the transparent electrode 5 and the back electrode 2 which in tandem, depending on the phase of the AC signal, alternate in driving displacement current electrons into the light emitting layer matrix from either surface. The Applicant further claims a "recombination region on the inorganic phosphor" in combination with both the "controllable hole injection structure" and the "controllable electron injection structure" As noted, since Watanabe is driving electrons into the light emission layer matrix, Watanabe is exciting the matrix ions to higher electron energy states and when the matrix ions relax, the light is emitted by a transition from the matrix ion's higher electron states to lower states depending on the band gap of the matrix. Applicant's claimed structure, by having independent controllable hole and electron injection structures, allows the amount of holes and electrons that are formed in the inorganic phosphor to be independently varied to account for various material work functions and injection efficiencies. These independently injected holes and electrons are allowed to drift toward each other and recombine in the "recombination region of the inorganic phosphor" and it is this recombination that allows for the creation of light (photons) rather than impact ionization and relaxation like Watanabe's disclosed structure.

Furthermore, it would not be obvious to modify Watanabe's structure to be driven as a controllable structure with a recombination region. Watanabe discloses only two electrodes, the transparent electrode 5 and the back electrode 2 each isolated from the inorganic phosphor by an insulating layer. Simply applying a DC voltage to the two electrodes would not cause and holes and electrons to drift towards each other to recombine but only to be attracted to respective electrodes. The dual insulating layers prevents any DC current in the inorganic phosphor. Thus, there is no mechanism disclosed by Watanabe that would provide for independent control between the back and transparent electrode.

Claims 2-6 depend upon claim 1 and are believed patentable based at least on the patentability of claim 1, as amended. However, it is believed some are separately patentable as well.

For claim 2, as noted above, Watanabe does not disclose a hole injection structure and thus does not disclose a first control voltage to control a rate of hole injection. As noted, Watanabe discloses two dependent electrodes that alternately (on opposite AC phases) inject hot electrons into the light emission matrix to cause impact ionization.

For claim 3, as noted above Watanabe discloses an impact ionization structure that connects to a single AC voltage source to be operable. Therefore, Watanabe does not disclose a second applied control voltage to control a rate of electron injection into the inorganic phosphor.

For claim 4, likewise, Watanabe does not disclose a third applied voltage to control the electroluminescence intensity produced by the device. Nor is it possible to conceive how even a third applied voltage is applicable to a two electrode structure without modifying Watanabe as taught by the Applicant to incorporate the structure claimed by the Applicant.

For claim 5, likewise, Watanabe does not disclose first, second, and third applied control voltages wherein *the third control voltage operates independently* of the first and second applied control voltages.

Accordingly, Applicant's claims 1-6, as amended, are believed to not be anticipated nor made obvious by the art made of record. Withdrawal of the rejection under 35 USC 102(b) and allowance of claims 1-6, as amended, is respectfully requested.

In Section 6 of the Office Action, the Examiner objected to claims 7-39 as being dependent upon a rejected base claim but that they would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant wishes to express his appreciation to the Examiner for this indication of allowance. Claims 7, 21 and 35 which depended upon claim 1 have been amended to include the limitations of claim 1 and placed in independent format. Claims 8-20 depend from claim 7 directly or indirectly. Claims 22-34 depend from claim 21 directly or indirectly. Claims 36-39 depend from claim 35 directly or indirectly. As such, claims 7-39 are now believed to be in condition for allowance and such allowance is respectfully requested.

The prior art made of record but not relied upon by the Examiner has been reviewed, but is no more pertinent to Applicants' invention than the cited reference for the reasons given above.

Applicant believe his claims as amended are patentable over the art of record, and that the amendments made herein are within the scope of a search properly conducted under the provisions of MPEP 904.02. Accordingly, claims 1-39 are deemed to be in condition for allowance, and such allowance is respectfully requested.

If for any reason the Examiner finds the Application other than in a condition for allowance, the Examiner is respectfully requested to call Applicant's undersigned representative at the number listed below to discuss the steps necessary for placing the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 08-2025. Should such fees be associated with an extension of time, Applicant respectfully requests that this paper be considered a petition therefore.

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